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Subject: **Canada Gazette Notice No. SLPB-005-17, Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz Band, published 19 August 2017 – Reply Comments**

Bell Mobility Inc. is pleased to submit the attached Reply Comments in the above-noted consultation.

Yours truly,

[*Original signed by R. Malcolmson*]

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Attachment

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CANADA GAZETTE NOTICE NO. SLPB-005-17

**CONSULTATION ON A TECHNICAL, POLICY AND LICENSING
FRAMEWORK FOR SPECTRUM IN THE 600 MHz BAND**

**PUBLISHED IN THE *CANADA GAZETTE, PART I*
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**REPLY COMMENTS
OF
BELL MOBILITY INC.**

3 NOVEMBER 2017

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EXECUTIVE SUMMARY

E1. The *Spectrum Policy Framework for Canada* states that "regulatory measures, where required, should be minimally intrusive, efficient and effective".¹ We believe the standard of "minimally intrusive" should be viewed such that if there is more than one viable market intervention option, then ISED must select the one that intervenes the least in the normal operation of the market. As several interveners noted, set-asides are not the least intrusive of the multiple intervention options available to ISED. In fact, the evidence is overwhelming that set-asides would be highly intrusive compared to other options.

E2. Intervenors such as Rogers² and Telus³ describe how set-aside eligible bidders in previous auctions were able to grossly inflate the prices paid for open blocks of spectrum while ensuring that the price paid for set-aside spectrum remained highly discounted. As discussed in our comments, this type of behaviour, led to a situation in the AWS-1 auction where incumbents paid 28 times more for their spectrum than the successful set-aside eligible bidders.⁴ This clearly does not mimic the outcomes that would have resulted from market forces and cannot credibly be characterized as minimally intrusive.

E3. Rogers cited a 2017 report released by the international wireless organization GSMA⁵ (GSMA Report)⁶ which found that Canada has had the highest spectrum cost per person across 21 higher-income countries over the last decade – 75% higher than the U.S. and more than six times higher than the U.K.⁷ Rogers correctly notes that, while wireless carriers directly pay these costs to the Government, Canadian consumers ultimately pay a significant share.

E4. With significant evidence that set-asides are likely to lead to artificially inflated auction prices, regulatory gaming, higher consumer prices, lower industry investment and lower service quality, other less intrusive forms of market intervention should be preferred. A 20 MHz spectrum cap could address ISED's concerns about limiting the risk of spectrum concentration (since no party could acquire more than 20 MHz) without introducing the risks associated with

¹ Spectrum Policy Framework of Canada, DGTP-001-07, June 2007, page 9.

² Rogers Comments, paragraphs 46 to 49. Note that all references to "Comments" in this document refer to the 6 October 2017 submissions to ISED filed by the company in question in response to the Notice.

³ Telus Comments, paragraphs 39 to 41.

⁴ Bell Mobility Comments, paragraph 22.

⁵ GSMA stands for Groupe Spéciale Mobile Association.

⁶ Richard Marsden, Dr. Bruno Soria, and Hans-Martin Ihle, *Effective Spectrum Pricing: Supporting better quality and more affordable mobile service*, GSMA, February 2017, <https://www.gsma.com/spectrum/wp-content/uploads/2017/02/Effective-Spectrum-Pricing-Full-Web.pdf>.

⁷ Based on Figure 1 of Rogers Comments.

set-asides. We continue to believe that no "pro-competitive" measures are necessary, however, a spectrum cap of 20 MHz would be a better policy choice than a set-aside.

E5. We agree with Telus that an effective way to ensure set-aside bidders pay a fair price and are not able to drive up costs for non-set-aside eligible bidders is to prevent set-aside eligible bidders from bidding on the non-set-aside spectrum.⁸ Holding two separate, simultaneous auctions would allow spectrum to be allocated to the regional service providers while preventing the type of bidding behavior that occurred in the AWS-1 spectrum auction. This measure would also greatly simplify the auction structure and remove the need for the proposed price incrementing methodology. With this structure, the auctions would be more likely to achieve their purpose – allocating spectrum to those that value it the most.

E6. A few interveners, such as Shaw, suggest that a set-aside is needed "given that cellular spectrum was handed to Rogers, Bell, Telus, and other regional incumbents for free over 35 years ago".⁹ This perspective is incorrect and misleading. In fact, Bell, Rogers and Telus have paid billions of dollars in spectrum licence fees on non-auctioned spectrum over many years. Telus' comments refer to an estimate by telecommunications industry analyst and consultant Mark Goldberg who found that: "[i]n total, the three companies [Bell, Rogers and Telus] have paid more than three and a half billion dollars in license fees."¹⁰ It is therefore false to suggest that incumbents received "free" spectrum and ISED should reject calls to disadvantage incumbents in future auctions to compensate non-incumbents for an issue that does not exist.

E7. Some interveners proposed the use of a simultaneous multiple round ascending (SMRA) or hybrid SMRA auction format. We agree with the Department's assessment that a combinatorial clock auction (CCA) process is an improvement over the SMRA auction format because it enables bidders to bid on packages of licences instead of individual licences which eliminates the risk that bidders will win some, but not all of the licences they desire.

E8. Other interveners supported the CCA format with the GARP-based activity rule but we recommend that the Department adopt the CCA that uses the WARP-based activity rule. The GARP-based activity rule is significantly more restrictive than the WARP-based activity rule, and therefore may not always permit – let alone encourage – truthful bidding. The GARP-based

⁸ Telus Comments, paragraph 40.

⁹ Shaw Comments, paragraph 31.

¹⁰ Mark Goldberg, *Two sides to every coin*, 10 October 2017, <http://mhgoldberg.com/blog/>.

activity rule is only guaranteed to allow truthful bidding if all bids are consistent with some implied set of valuations, which must be known in advance and cannot be changed in the course of the auction. The WARP-based activity rule leaves room for exploration and revision and allows the clock rounds to perform their function. The GARP-based activity rule does not have these features, and denies the logical foundation of the CCA design.

E9. There was limited support for the Enhanced Combinatorial Clock Auction (ECCA) and we strongly recommend the Department reject this option. As we argued in our initial comments, there is no theory or evidence that the ECCA may improve incentives for truthful bidding. Rather, truthful expression of demand with respect to the clock prices is not generally a bidder's best strategy under the ECCA format. In addition, the ECCA format does not set prices for winners equal to the actual opportunity costs of the blocks they win. As the Consultation describes, prices for winners under the ECCA format are calculated according to the *maximum* valuations that their opponents *could possibly have* for all available licences. Even if the bidders were to bid truthfully, the discount-adjusted prices presented in the clock phase can be very different from true opportunity costs. The Consultation's claims about the properties of the ECCA are unsupported conjectures, which appear to be largely false: ECCA does not generally incentivize truthful bidding or decrease bidder uncertainty.

E10. Despite its importance and popularity, local television's reliance on a single revenue stream (advertising) has seen the financial health of the sector decline in recent years. In the last five years, private local television stations have sustained pre-tax losses of more than \$700 million.¹¹ This is clearly not sustainable over the longer term. Moreover, even though television transmitters have a lifespan of many decades, seven of the transmitters we are now being asked to transition were only installed in 2011 to facilitate an earlier spectrum reassignment by ISED. In total, we invested over \$23 million to convert 23 transmitters at that time. We were not compensated for these costs, which have not been fully depreciated.

E11. We proposed that the Government cover the costs incurred by local television stations to vacate the 600 MHz spectrum in order to accommodate the plan to re-allocate the spectrum to mobile use. This proposal is supported by the Canadian Association of Broadcasters (CAB) which states, "broadcasters should be fully compensated for 100 percent of all costs associated with the 600 MHz conversion, including: engineering consultants; tower work; building and site

¹¹ CRTC, Conventional Television Statistical and Financial Summaries, 2012-2016, page 1; available at: <http://crtc.gc.ca/eng/publications/reports/BrAnalysis/tv2016/tv2016.pdf>.

preparation and reconfiguration; equipment reconfiguration and/or replacement; equipment installation; project staff resources; replacement of studio equipment; and a consumer awareness campaign."¹²

E12. The concept of using auction proceeds to fund local television is not dissimilar to the approach taken in the U.S. where local broadcasters are being compensated to vacate the 600 MHz spectrum by way of an incentive auction which will see stations being paid for the spectrum they vacate. We also proposed that the Government dedicate a portion of the auction proceeds to create an independently administered fund to support local television stations across the country. Specifically, 10% of the auction proceeds should be put into an independently-administered fund that would direct monies to licensed local television stations to help support the cost of producing local programming, much like the former Local Programming Improvement Fund did. This local TV fund would provide much needed support for many years, especially given the glaring absence of any mention of the critical importance of local television to local communities in the recently released *Creative Canada: Policy Framework*.¹³

¹² CAB Comments, paragraph 22.

¹³ <https://www.canada.ca/content/dam/pch/documents/campaigns/creative-canada/CCCadreFramework-EN.pdf>.

1.0 INTRODUCTION

1. In accordance with the procedure set out in Innovation, Science and Economic Development Canada (ISED or the Department) Notice No. SLPB-005-17, *Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz Band*, as published in the Canada Gazette, dated 19 August 2017 (the Notice), Bell Mobility Inc. (Bell) is pleased to provide the following Reply Comments. We have reviewed the comments of the following parties which were posted to the Department's website: 6Harmonics, Bragg Communications Inc. (Eastlink), British Columbia Broadband Association (BCBA), Canadian Cable Systems Alliance Inc. (CCSA), Canadian Association of Broadcasters (CAB), Canadian Association of the Wireless ISPs (CanWISP), Corridor Communications Inc. (CCI), Cogeco Communications Inc. (Cogeco), ECOTEL Inc. (Ecotel), Federation of Canadian Municipalities (FCM), Ice Wireless Inc. (IWI), Independent Telecommunications Providers Association (ITPA), Key Bridge Wireless LLC (Keybridge), MRC de Témiscouata, Québecor Média Inc. (Videotron), Railway Association of Canada, Rogers Communications Canada Inc. (Rogers), Saskatchewan Telecommunications (SaskTel), Shaw Communications Inc. (Shaw), Sogetel Mobilité Inc. (Sogetel), SSI Micro Ltd. (SSI), Tbaytel, Telus Communications Company (Telus) and Xplornet Communications Inc. (Xplornet).

2. We will address the issues raised in the order of their appearance in the Notice.

2.0 TREATMENT OF EXISTING SPECTRUM USERS

3. Despite its importance and popularity, local television's reliance on a single revenue stream (advertising) has seen the financial health of the sector decline in recent years. In the last five years private local television stations have sustained pre-tax losses of more than \$700 million.¹⁴ This is clearly not sustainable over the longer term. Moreover, the 600 MHz auction is expected to generate more than \$1.5 billion in revenue for the Government, and as such, represents an ideal vehicle for compensating over-the-air (OTA) TV licensees who are being forced to vacate their current spectrum positions. The cost of ISED's proposed repacking plan is a financial burden that the sector cannot afford. Even though television transmitters have a lifespan of many decades, seven of the transmitters we are now being asked to transition were only installed in 2011 to facilitate an earlier spectrum reassignment by ISED. In total, we invested over \$23 million to convert 23 transmitters at that time. We were not

¹⁴ CRTC, Conventional Television Statistical and Financial Summaries, 2012-2016, page 1; available at: <http://crtc.gc.ca/eng/publications/reports/BrAnalysis/tv2016/tv2016.pdf>.

compensated for these costs, which have not been fully depreciated. These costs generated no new revenue given that the overwhelming majority of tuning to local television stations occurs through broadcasting distribution undertakings such as cable, Internet Protocol Television and direct-to-home satellite, rather than OTA.

4. Rogers also raised concerns regarding the substantial additional costs that will be incurred as part of the 600 MHz repacking process:

As recently as 2011, [broadcasters] were required to incur substantial costs to transition from analog to digital technology and to implement the current digital television (DTV) allotment plan. These investments have not been fully depreciated. The Department's new DTV allotment plan that incorporates the 600 MHz repacking process affects virtually all OTA broadcasters, meaning that these companies will be required to incur additional substantial costs above and beyond those that they have already incurred to implement the current allotment plan. These costs will further erode the already unsustainable economics associated with the OTA television broadcasting market.¹⁵

5. This is a broad industry issue that was also raised by the CAB:

While local television continues to serve a vital public function, including the provision of local news, and is valued by a majority of Canadians, OTA stations are struggling financially. The costs of the 600 MHz repackaging will place a burden on OTA television stations that they simply cannot afford. Broadcasters are still grappling with costs incurred from the 700 MHz spectrum conversion in 2011-2014. Taking on significant incremental expenses related to the 600 MHz conversion will place local television across Canada in jeopardy.¹⁶

6. In light of these factors, we proposed that the Government compensate local television stations for the costs they will incur to vacate the 600 MHz spectrum in order to accommodate the plan to re-allocate the spectrum to mobile use. This proposal is supported by the CAB which states, "broadcasters should be fully compensated for 100 percent of all costs associated with the 600 MHz conversion, including: engineering consultants; tower work; building and site preparation and reconfiguration; equipment reconfiguration and/or replacement; equipment installation; project staff resources; replacement of studio equipment; and a consumer awareness campaign".¹⁷

¹⁵ Rogers Comments, paragraph 25.

¹⁶ CAB Comments, paragraph 5.

¹⁷ CAB Comments, paragraph 22.

7. The concept of using auction proceeds to fund local television is not dissimilar to the approach taken in the U.S. where local broadcasters are being compensated to vacate the 600 MHz spectrum by way of an incentive auction which will see stations being paid for the spectrum they vacate. We also proposed that the Government dedicate a portion of the auction proceeds to create an independently administered fund to support local television stations across the country. Specifically, 10% of the auction proceeds should be put into an independently-administered fund that would direct monies to licensed local television stations to help support the cost of producing local programming, much like the former Local Programming Improvement Fund did. This local TV fund would provide much needed support for many years, especially given the glaring absence of any initiative to support local television in the recently released *Creative Canada: Policy Framework*.¹⁸

8. The Department has provided a staggered transition period for broadcasters to clear the spectrum, with the last Phase end date being in the first quarter of 2022.¹⁹ The timing of the 600 MHz auction was not indicated in the Notice. We propose that the auction should not occur until the spectrum in question has been vacated by the broadcasters. It is unnecessarily onerous for successful bidders to pay hundreds of millions of dollars for something that they cannot use.

3.0 SET-ASIDES

3.1 Question 1A

ISED is seeking comments on its proposal to implement a set-aside as a pro-competitive measure in the auction process for the 600 MHz band.

9. The *Spectrum Policy Framework for Canada* requires that, when establishing spectrum policy, "market forces should be relied upon to the maximum extent feasible".²⁰ The "maximum extent feasible" is an exceptionally strict standard for regulatory intervention in the market and as such, if the Department departs from this standard it should clearly set out its supporting rationale and evidence. In the present case of the 600 MHz auction, this would mean that if it is feasible to run an auction without a set-aside, then it must be done. The evidence demonstrates that it is not only feasible, it will result in better outcomes for Canadians. Some will argue that it is not feasible because of a perceived lack of competition in the retail market for mobile wireless services. As explained below, the record of this Consultation demonstrates that the market is highly competitive.

¹⁸ <https://www.canada.ca/content/dam/pch/documents/campaigns/creative-canada/CCCadreFramework-EN.pdf>.

¹⁹ ISED, *Digital Television (DTV) Transition Schedule*, April 2017.

²⁰ Spectrum Policy Framework for Canada, DGTP-001-07, June 2007, page 9.

10. Arguments that there is insufficient competition among wireless carriers typically relied on the various assessments by the Competition Bureau: 1) the Bureau's assessment in the Commission's proceeding on wholesale wireless services (TNC 2013-685)²¹; 2) the Bureau's 2013 analysis of the acquisition of Public Mobile by Telus²²; and 3) the Bureau's analysis of Bell Canada's acquisition of MTS Inc..²³ None of these is a valid consideration in the current Consultation.

11. In our initial comments in this proceeding (see paragraphs 9 to 14) we explain why the Bureau's various conclusions about the competitiveness of the market were incorrect and should be rejected. We will not reiterate that explanation here but it continues to apply. The expert report submitted by Telus (by Dr. Christian Dippon, hereafter referred to as the Dippon Report) also refutes the Bureau's assessments in TNC 2013-685 which were arrived at almost five years ago and does not reflect current market conditions. The Dippon Report concludes that "[t]here is no evidence of market power, and ISED must weigh the 2014 claim by the Competition Bureau against the vast contemporaneous evidence demonstrating the opposite".²⁴ Among other criticisms, the Dippon Report notes that: the Bureau's claim of market power is outdated; there is strong evidence that the mobile wireless market in Canada is competitive; there is no apparent study underlying the Bureau's conclusion of market power; and the Bureau's conclusions were reached before the Commission introduced several pro-competitive measures.²⁵

12. Our initial comments demonstrated that the market for mobile wireless services is highly competitive today by summarizing the relevant evidence from our submission in the Canadian Radio-television and Telecommunication Commission's (Commission's) reconsideration of Decision 2017-56 (TNC 2017-259).²⁶ The wide-ranging evidence we provided in TNC 2017-259

²¹ This Bureau analysis was the reference provided at paragraph 22 of the Consultation. It was also cited at paragraph 6 of Cogeco's comments. TNC 2013-685 refers to Telecom Notice of Consultation CRTC 2013-685, *Wholesale mobile wireless roaming in Canada – Unjust discrimination/undue preference*.

²² The Bureau relies upon its assessment of Telus' acquisition of Public Mobile for its conclusions in TNC 2013-685.

²³ This Bureau analysis (found at <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04200.html>) was referenced at paragraph 7 of Cogeco's comments and at paragraph 17 of Shaw's comments. The Consultation (footnote 2) also states that: "The Competition Bureau has previously stated "incumbent service providers do have market power in the provision of retail mobile wireless services" *the Submission by the Commissioner of Competition Before the Canadian Radio-television and Telecommunications Commission – Telecom Notice of Consultation CRTC 2013-685 – Wholesale mobile wireless roaming in Canada – Unjust discrimination/undue preference document*."

²⁴ Dippon Report, paragraph 8.

²⁵ Dippon Report, paragraphs 33 to 48.

²⁶ Telecom Notice of Consultation CRTC 2017-259, *Reconsideration of Telecom Decision 2017-56 regarding final terms and conditions for wholesale mobile wireless roaming service*, available on the Commission's website at: <https://services.crtc.gc.ca/pub/ListeInterventionList/Documents.aspx?ID=241087&en=2017-259&dt=i&lang=e&S=C&PA=t&PT=nc&PST=a>.

showed that the Canadian market is defined by: innovation, competitive rivalry, frequent price reductions, high levels of investment, world-class network and service quality, extensive smartphone adoption, aggressive retail competition and service affordability. These are all characteristics of a competitive market. The Dippon Report similarly cites a wide variety of supportive evidence including a competitive analysis prepared by economic consulting firm NERA²⁷ which was submitted by Telus in TNC 2017-259.

13. In part, the Consultation relies on the Bureau's analysis regarding Bell Canada's acquisition of MTS Inc.²⁸ as support for proposing pro-competitive measures in the 600 MHz auction. In that statement, the Bureau concludes that lower prices are caused by the presence of a strong regional competitor.²⁹ Even if this conclusion is correct, then any pro-competitive remedies would only be necessary in geographic markets where there is no strong regional competitor. In other words, using the Bureau's own analysis, pro-competitive measures would be unnecessary throughout the provinces of Quebec and Saskatchewan, as well as in large territories of British Columbia, Alberta, Ontario and Atlantic Canada where Shaw, Eastlink and other strong regional competitors are present. Imposing pro-competitive measures on a national basis, as proposed in the Consultation, would be a misapplication of the Bureau's findings in the Bell-MTS analysis.

14. Beyond the evidence demonstrating that pro-competitive measures are not needed generally, interveners provided specific evidence that large cable incumbents, such as Shaw, Videotron, Eastlink and Cogeco, do not require the massive financial subsidies that typically result from pro-competitive measures. Paragraphs 21 to 30 of our comments provide a detailed explanation of this issue. Rogers reached a similar conclusion to ours, noting:

After four auctions with highly advantageous rules for some participants, spectrum set-asides are no longer necessary. For the last ten years, ISED has successfully focused on introducing and maintaining new wireless carriers. Today, there is a strong fourth operator in each region of Canada. No longer made up of stand-alone wireless start-ups, they are all now part of established, diverse telecommunications companies with strong balance sheets that do not need taxpayer subsidies. They all possess spectrum portfolios that include low, mid, and high mobile spectrum bands. These spectrum portfolios provide the fourth carriers with a very high MHz-per customer ratio and they do not face the same spectrum, capacity, and coverage constraints that national carriers do. Therefore, Shaw, Videotron, and Eastlink, some of Canada's largest

²⁷ TNC 2017-259, Expert Report of Jeffrey A. Eisenach, Ph.D. on behalf of Telus, 8 September 2017.

²⁸ Footnote 3 of the Consultation references the Competition Bureau's statement regarding Bell Canada's acquisition of MTS Inc., 15 February 2017, <http://www.competitionbureau.gc.ca/eic/site/cb-bc.nsf/eng/04200.html>.

²⁹ Consultation, paragraph 22.

communications conglomerates, no longer need any public support obtaining spectrum, let alone indirect subsidies worth hundreds of millions of dollars.³⁰

15. CCI similarly noted that treating large, profitable cable companies as if they were small upstarts in need of financial assistance is poor public policy.

However, CCI does not agree with the proposed [sic] definition of a "national incumbent service provider" as described in SLPB-005-17 as "companies with 10% or more of the national wireless subscriber market share". CCI believes that definition unjustly discriminates against the "big three" incumbent service providers, given there are additional telecommunications entities that are of similar size, and means, but are eligible to bid on the set-aside spectrum because they lack the necessary share of the wireless subscriber market to be considered a "national incumbent service provider".³¹

16. Even Cogeco, which is actively seeking to secure the financial subsidies that a set-aside offers, observed with respect to Eastlink, Shaw and Videotron: "[t]hese parties have already benefited from pro-competitive measures designed to facilitate their entry and they are now established in the market".³²

17. The discussion above dispels the notion that pro-competitive measures are necessary for the 600 MHz auction. In fact, imposing pro-competitive measures under the circumstances would clearly contravene the requirement in the *Spectrum Policy Framework for Canada* that market forces should be relied upon to the maximum extent feasible. We are aware of no analysis by ISED that shows that such measures fulfil this policy mandate.

18. The *Spectrum Policy Framework for Canada* also states that "regulatory measures, where required, should be minimally intrusive, efficient and effective".³³ We believe the standard of "minimally intrusive" should be viewed such that if there is more than one viable market intervention option, then ISED must select the one that intervenes the least in the normal operation of the market. As several interveners noted, set-asides are not the least intrusive of the multiple intervention options available to ISED. In fact, the evidence is overwhelming that set-asides would be highly intrusive compared to other options.

³⁰ Rogers Comments, paragraph 6.

³¹ CCI Comments, page 3.

³² Cogeco Comments, paragraph 57.

³³ *Spectrum Policy Framework for Canada*, DGTP-001-07, June 2007, page 9.

19. For example, interveners such as Rogers³⁴ and Telus³⁵ describe how set-aside eligible bidders in previous auctions were able to grossly inflate the prices paid for open blocks of spectrum while ensuring that the price paid for set-aside spectrum remained highly discounted.

Telus noted:

Public historical bidding data provides strong evidence of malicious bidding behaviour in the 2008 AWS-1 auction. The auction of unrestricted AWS-1 spectrum effectively ended in round 23 and for an astounding 308 additional rounds, the set-aside eligible bidders including the proposed 600 MHz set-aside eligible bidders Eastlink, Videotron and Shaw displayed some of the most blatant examples of gaming behaviour on the global spectrum auction record by deliberately and systematically pushing open spectrum prices up in each of the service areas in Canada.³⁶

20. Rogers cited similar dysfunctional behaviour:

Strategic bidding by new entrants plagued the AWS-1 auction. The new entrants repeatedly bid on open blocks when cheaper set-aside blocks were available. Knowing the national carriers had no choice but to re-bid for the open licence blocks due to the artificial spectrum scarcity created by the set-aside, the new entrants freely parked their eligibility points on the open blocks, driving up the costs for the national carriers while keeping the set-aside prices down. There is no reason to think they will behave otherwise in this auction.³⁷

21. As discussed in our comments, this type of behaviour led to a situation in the AWS-1 auction where incumbents paid 28 times more for their spectrum than the successful set-aside eligible bidders.³⁸ This clearly does not mimic the outcomes that would have resulted from market forces and cannot credibly be characterized as minimally intrusive.

22. On their face, set-asides create an artificial spectrum supply shortage for non-set-aside eligible bidders which significantly increases the prices paid at auction. This artificial supply shortage, combined with the effects of the auction gaming discussed above, drive up auction prices, which in turn, will inevitably lead to higher wireless service prices for Canadian consumers. As noted in the Dippon Report:

Furthermore, high prices for spectrum may lead firms to become cash constrained. This forces a firm to charge higher prices as the only means to raise sufficient cash to make new investments because a lower price would not be sufficient to internally finance investments although a lower price would yield a steadier revenue stream.³⁹

³⁴ Rogers Comments, paragraphs 46 to 49.

³⁵ Telus Comments, paragraphs 39 to 41.

³⁶ Telus Comments, paragraph 40.

³⁷ Rogers Comments, paragraph 46.

³⁸ Bell Comments, paragraph 22.

³⁹ Dippon Report, paragraph 78.

23. Similarly, high auction prices also lead to lower investments, and consequently lower quality services for consumers:

High spectrum prices reduce the headroom that wireless carriers have to make investments. Thus constrained, their investments are less than they would otherwise be, and the resultant quality is lower than it would otherwise be.⁴⁰

24. Rogers cited a 2017 report released by the international wireless organization GSMA⁴¹ (GSMA Report)⁴² which found that Canada has had the highest spectrum cost per person across 21 higher-income countries over the last decade – 75% higher than the U.S. and more than six times higher than the U.K.⁴³ Rogers correctly notes that, while wireless carriers directly pay these costs to the Government, Canadian consumers ultimately pay a significant share.

25. In sum, the negative consequences of high spectrum costs, which set-asides promote, are severe. As the GSMA Report concludes:

The report presents new empirical evidence, consistent with related academic literature, that links high spectrum spend with

1. Lower quality networks and reduced take-up of mobile data services owing to reduced incentives for investment;
2. Higher consumer prices for mobile broadband data; and
3. Lost consumer welfare with a purchasing power of US\$250bn across a group of countries where spectrum was priced above the global median.⁴⁴

26. With significant evidence that set-asides lead to artificially inflated auction prices, regulatory gaming, higher consumer prices, lower industry investment and lower service quality, other, less intrusive, forms of market intervention should be preferred. If the Department has concerns about spectrum concentration, a 20 MHz spectrum cap could address those concerns (since no party could acquire more than 20 MHz) without triggering the negative consequences associated with intrusive set-asides. We continue to believe that no "pro-competitive" measures are necessary, however, a spectrum cap of 20 MHz would be more consistent with the requirements of the *Spectrum Policy Framework for Canada* as compared to a highly intrusive set-aside.

⁴⁰ Dippon Report, paragraph 79.

⁴¹ GSMA stands for Groupe Spéciale Mobile Association.

⁴² Richard Marsden, Dr. Bruno Soria, and Hans-Martin Ihle, *Effective Spectrum Pricing: Supporting better quality and more affordable mobile service*, GSMA, February 2017, <https://www.gsma.com/spectrum/wp-content/uploads/2017/02/Effective-Spectrum-Pricing-Full-Web.pdf>.

⁴³ Based on Figure 1 of Rogers Comments.

⁴⁴ Dippon Report, paragraph 74. [Or GSMA Report, page 1.]

27. We reiterate our position that there should be no set-aside spectrum for the licences being auctioned in the North due to low demand. Removing the set-aside requirement on Northern spectrum licences would be consistent with the approach taken for Northern licences in the 2500 MHz band, and would ensure that this spectrum gets assigned in an efficient and timely manner.

28. Finally, some interveners, such as Shaw, suggest that a set-aside is needed "given that cellular spectrum was handed to Rogers, Bell, Telus, and other regional incumbents for free over 35 years ago".⁴⁵ This perspective is incorrect and misleading. In fact, Bell, Rogers and Telus have paid billions of dollars in spectrum licence fees on non-auctioned spectrum over many years. Telus' comments refer to an estimate by telecommunications industry analyst and consultant Mark Goldberg who found that: "[i]n total, the three companies [Bell, Rogers and Telus] have paid more than three and a half billion dollars in license fees".⁴⁶ It is therefore false to suggest that incumbents received "free" spectrum and ISED should reject calls to disadvantage incumbents in future auctions to compensate non-incumbents for an issue that does not exist.

3.2 Question 1B

ISED is seeking comments on its proposal to set aside 30 MHz of spectrum in the 600 MHz band for eligible entities and to have open bidding (no pro-competitive measures) on the remaining 40 MHz in the band.

29. As noted above, a set-aside is neither necessary nor appropriate for the auction of the 600 MHz band. Not only do the so-called "new entrants" have no need for the significant government subsidy that a set-aside represents, previous experience with set-asides has proven that they distort the process to the ultimate detriment of Canadian taxpayers. From a public policy perspective, a spectrum cap would be a preferable alternative to a set-aside, and multiple interveners made this suggestion in their submissions. As Telus argues, a spectrum cap would be far more effective than a set aside at achieving the Department's goals, since it avoids the issues of unjustified subsidies and gaming opportunities while still ensuring fair distribution of the band.⁴⁷

⁴⁵ Shaw Comments, paragraph 31.

⁴⁶ Mark Goldberg, *Two sides to every coin*, 10 October 2017, <http://mhgoldberg.com/blog/>.

⁴⁷ Telus Comments, paragraph 51.

30. BCBA, Rogers, Telus, and Xplornet all proposed a cap of 20 MHz on the 600 MHz band, while Cogeco proposed that the spectrum set-aside be increased to 40 MHz and that a new 20 MHz cap be put in place for set-aside-eligible bidders that previously benefited from spectrum set-asides in the AWS-1 or AWS-3 auction.⁴⁸ As noted by Telus, a 20 MHz spectrum cap would guarantee four winners and would also provide an effective set-aside of 10 MHz:

A two block band cap would guarantee four winners and create an effective set-aside of 10 MHz. This would mirror the competitive measures the Department implemented in the 2015 auction of BRS spectrum where there were, like the 600 MHz band, seven paired blocks and no operator able to acquire more than two paired blocks.⁴⁹

31. We continue to believe that no "pro-competitive" measures are necessary, however, a spectrum cap of 20 MHz would be a better policy choice than a set-aside. A spectrum cap could address ISED's concerns about limiting the risk of spectrum concentration (since no party could acquire more than 20 MHz) without introducing the risks of regulatory gaming that are associated with set-asides.

32. A 600 MHz band-specific cap is a more appropriate measure than the sub-GHz cap also proposed by Telus.⁵⁰ A sub-GHz cap does not achieve the Department's objectives any more so than the 20 MHz cap proposed above. However, it would unnecessarily increase the complexity of the auction since each bidder would be allowed to bid on a different amount of spectrum depending on the service area.

33. If ISED chooses nonetheless to set aside spectrum, then we agree with Telus⁵¹ and Rogers⁵² that the amount should be no more than 20 MHz for the following reasons.

34. First, given the more stringent eligibility requirements for bidding on set-aside spectrum, there are likely to be fewer set-aside-eligible bidders for 600 MHz spectrum than there were in previous auctions. As a result, demand for set-aside spectrum should be lower.

35. Second, as Telus points out, setting aside more than 20 MHz would offer an enormous competitive advantage to set-aside-eligible bidders:

⁴⁸ Cogeco Comments, paragraph 17.

⁴⁹ Telus Comments, paragraph 52.

⁵⁰ Telus Comments, paragraphs 53 to 57.

⁵¹ Telus Comments, paragraph 10b.

⁵² Rogers Comments, paragraph 10.

The set-aside must not exceed 20 MHz (29% of the band) as a larger set-aside would provide privileged access to a block of contiguous sub-GHz spectrum the size of which no national operator holds.⁵³

36. Third, a 30 MHz set aside is counterproductive to ISED's goal of promoting deployment in rural areas. Rogers explains:

As low band spectrum, like the 600 MHz band, is ideal for rural coverage, such spectrum disadvantages in practical terms could translate into both less capital and less spectrum for rural deployments. At a time when both ISED and the CRTC are looking for ways to improve connectivity in areas traditionally with challenging economics to provide advanced services, it does not make good policy to reduce the available spectrum to the only two national wireless networks that are most likely to serve such areas.⁵⁴

37. Potential set-aside-eligible bidders argued that, rather than eliminating or decreasing the set-aside as we and others have recommended, the set-aside should be increased to 40 MHz.⁵⁵ As Cogeco posits, this would accommodate two set-aside-eligible bidders with 20 MHz each.⁵⁶ While it is understandable that set-aside eligible bidders would want access to more discounted spectrum, there is no technical or business reason which requires a minimum 20 MHz of bandwidth.⁵⁷

38. Cogeco's proposal to increase the set-aside to 40 MHz also includes a threat that it will only participate in the 600 MHz auction if ISED adopts all of its proposals, which include: increasing the amount of set-aside spectrum to 40 MHz; introducing the 20 MHz cap for current facilities-based regional service providers mentioned above; and licensing the set-aside spectrum on a Tier 4 basis in most areas but on a sub-Tier 4 basis in other areas to better align with Cogeco's current cable footprint.⁵⁸ We recommend that ISED reject Cogeco's ultimatum and instead structure the 600 MHz auction to benefit Canadians rather than Cogeco.

39. Finally, several interveners called for measures to address both the financial subsidization of set-aside eligible bidders and the potential for gaming in the auction. As explained above, the proposed set-aside enables the favoured bidders to minimize their own costs of acquiring spectrum while inflating others. Without measures to mitigate this, the 600 MHz auction will simply be a "windfall" for the non-national carriers paid for by the public.⁵⁹

⁵³ Telus Comments, paragraph 10b.

⁵⁴ Rogers Comments, paragraph 80.

⁵⁵ See comments from: Eastlink, BCBA, Cogeco, Quebecor, Shaw, and Sogetel.

⁵⁶ Cogeco Comments, paragraph 27.

⁵⁷ Rogers Comments, paragraph E4.

⁵⁸ Cogeco Comments, paragraph 17.

⁵⁹ Rogers Comments, paragraph 8.

40. The Dippon Report argues for the consideration of bidding credits. We do not agree. The Federal Communications Commission's (FCC) initial use of such measures was not successful and resulted in bidder bankruptcies and delays in spectrum deployment. As indicated above, the majority of set-aside-eligible bidders are well capitalized and can access the required funds necessary to purchase spectrum in an open auction. Thus, bidding credits are not necessary.

41. We agree with Telus that an effective way to ensure set-aside bidders pay a fair price and are not able to drive up costs for non-set-aside eligible bidders is to prevent set-aside eligible bidders from bidding on the non-set-aside spectrum.⁶⁰ Holding two separate, simultaneous auctions would allow spectrum to be allocated to the regional service providers while preventing the type of bidding behavior that occurred in the AWS-1 spectrum auction. This measure would also greatly simplify the auction structure and remove the need for the proposed price incrementing methodology. With this structure, the auctions would be more likely to achieve their purpose – allocating spectrum to those that value it the most.

3.3 Question 1C

ISED is seeking comments on its proposal to limit the eligibility criteria to bid on set-aside spectrum to those registered with the CRTC as facilities-based-providers, that are not national incumbent service providers, and that are actively providing commercial telecommunication services to the general public in the licence area of interest, effective as of the date of application to participate in the 600 MHz auction.

42. The presumed rationale behind having a set-aside is to make auctions accessible to those service providers who do not have the financial means to win spectrum at market prices in an open auction. The proposed 600 MHz framework defines such providers as those with less than 10% national market share. However, Telus correctly notes that a carrier's national subscriber market share has nothing to do with its ability to pay market prices in a spectrum auction. In fact, the set-aside eligible bidders who are expected to be the most active in the auction are "well capitalised, deliver quad plays in their incumbent territory, have similar net debt to EBITDA ratios...and drive roughly the same normalized operating cashflow."⁶¹ In short, they are fully capable of competing in an open auction.

⁶⁰ Telus Comments, paragraph 40.

⁶¹ Telus Comments, paragraph 37.

43. Many interveners, including Rogers,⁶² Eastlink,⁶³ Quebecor,⁶⁴ Tbaytel,⁶⁵ Xplornet,⁶⁶ SaskTel,⁶⁷ and Shaw⁶⁸ support the proposal to limit set-aside eligibility to existing facilities-based mobile wireless carriers. We also support this proposal. Indeed, several parties noted that the French version of the consultation specified that to be eligible to bid on the set-aside spectrum, facilities-based providers must be providing wireless service.⁶⁹ The English version of the consultation did not make this distinction. We agree with Rogers assessment that introducing "new, unsustainable competition" into the Canadian wireless market, in the form of entrants who are not currently providing mobile wireless services, will not benefit Canadian consumers and businesses.⁷⁰

3.4 Question 1D

ISED is seeking comments on its proposal to limit the transferability of the set-aside spectrum for the first five years of the licence term.

44. While some interveners supported the proposed five-year moratorium on transferring set-aside spectrum to the incumbents, and some even called for it to be extended, we maintain that this proposal is not in the best interest of Canadians. The Dippon Report called for the prohibition period to be shortened, arguing that spectrum is a scarce resource and consumers are always better off when it is deployed as efficiently as possible.⁷¹ We agree: if a regional provider cannot or will not deploy their spectrum, then it is not in the country's best interest to prevent its transfer to another carrier who will deploy it. We recommend that ISED remove the transfer prohibition altogether.

3.5 Question 1E

ISED is seeking comments on its proposal to auction the set-aside spectrum as three separate paired blocks of 5+5 MHz.

45. Only CCI⁷² disagreed with the Department's proposal to auction the set-aside spectrum as three separate paired blocks of 5+5 MHz. Having three separate paired blocks provides bidders with the flexibility to acquire different amounts of spectrum and allows them to

⁶² Rogers Comments, paragraph 93.

⁶³ Eastlink Comments, paragraph 21.

⁶⁴ Quebecor Comments, paragraph 48.

⁶⁵ Tbaytel Comments, paragraph 28.

⁶⁶ Xplornet Comments, page 4.

⁶⁷ SaskTel Comments, paragraph 8.

⁶⁸ Shaw Comments, paragraph 68.

⁶⁹ For example, see Eastlink Comments, paragraphs 29 to 30; Quebecor Comments, paragraphs 47 to 48.

⁷⁰ Rogers Comments, paragraph 93.

⁷¹ Dippon Report, paragraph 112.

⁷² CCI Comments, page 4.

aggregate spectrum into larger amounts if desired. In addition, as noted by Rogers, "auctioning the spectrum as separate paired blocks will allow for some competition for the set-aside spectrum while still allowing bidders to aggregate potential holdings into wider, contiguous blocks."⁷³

4.0 LICENCE AREAS

4.1 Question 2

ISED is seeking comments on its proposal to use Tier 2 service areas across the country, except in the three Territories (Yukon, Northwest Territories and Nunavut) where Tier 4 service areas would apply.

46. Some interveners⁷⁴ proposed the use of smaller service areas than Tier 2 while Cogeco⁷⁵, Tbaytel⁷⁶ and SSi Micro⁷⁷ argued that the areas should reflect their operating territories. However, the purpose of determining the appropriate service areas should not be based on the operating territories of a few prospective bidders. We continue to support the Department's proposal to use Tier 2 service areas across the country, except in the three Territories where Tier 4 service areas would apply. As noted by Shaw:

This geographic division reflects the physical propagation characteristics of 600 MHz spectrum and is large enough that the number of price clock rounds in the auction would not become overly burdensome, while at the same time being small enough to accommodate bidders with specific geographic interests. In the post-auction market, Tier 2 service areas would also facilitate and streamline coordination among licensees.⁷⁸

47. In addition, as noted by Rogers, the use of Tier 2 service areas is consistent with the Tier 2 service areas used for 700 MHz spectrum which has similar propagation characteristics as 600 MHz spectrum:

The use of these relatively large licence areas is consistent with the 700 MHz band, which has similar propagation characteristics, and the fact that this spectrum will be used to implement wide area mobile services. This will result in less coordination being required between licensees and will allow for more effective use of the radio spectrum than would be the case if smaller licence areas were used.⁷⁹

⁷³ Rogers Comments, paragraph 99.

⁷⁴ For example, see comments from BCBA, CCSA and EcoTel.

⁷⁵ Cogeco Comments, paragraph 86.

⁷⁶ Tbaytel Comments, paragraph 19.

⁷⁷ SSi Micro Comments, paragraph 32.

⁷⁸ Shaw Comments, paragraph 82.

⁷⁹ Rogers Comments, paragraph 100.

5.0 AUCTION FORMAT AND RULES

5.1 Question 3

ISED is seeking comments on:

- a) the proposal to use generic licences; and**
- b) the proposal to categorize all blocks won by set-aside-eligible bidders as set-aside blocks.**

48. All interveners either supported or did not object to the proposal to use generic licences.

49. We note that Eastlink agreed with us that categorizing all blocks won by set-aside-eligible bidders as set-aside blocks is not appropriate. Doing so would make otherwise "open" spectrum blocks subject to the proposed transferability restrictions raised in Question 1D of the Consultation. As Eastlink argues, it is inappropriate to "punish" set-aside-eligible bidders with an unnecessary constraint "simply because they are smaller and newer to the market."⁸⁰

5.2 Question 4

ISED is seeking comments on:

- a) the use of anonymous bidding during the auction; and**
- b) the information that will be disclosed to bidders during the clock rounds, as described in annex A (which would also apply to the CCA with a modified activity rule set out in annex B) and annex C.**

50. Eastlink was the only intervener to express opposition to the use of anonymous bidding.⁸¹ We disagree with their claim that anonymous bidding disadvantages smaller, regional providers – this policy equally benefits all participants by reducing the likelihood of gaming. As noted by the Department:

Anonymous bidding would help bidders focus on their valuations for the licences, the level of aggregate demand, and the prices, rather than on the bidding behaviour of competing bidders. Anonymous bidding is therefore anticipated to reduce the potential for anti-competitive behaviour, while simplifying the bidding process.⁸²

51. We also agree with the majority of interveners that the information disclosure policy is appropriate, subject to our comments below related to the three auction formats.

⁸⁰ Eastlink Comments, paragraph 54.

⁸¹ Eastlink Comments, paragraph 55.

⁸² The Notice, paragraph 56.

5.3 Question 5

ISED is seeking comments on:

- a) The advantages and disadvantages of the three auction formats being considered for the 600 MHz auction:**
 - i. Combinatorial clock auction, using the WARP-based activity rule (annex A);**
 - ii. Combinatorial clock auction, using the GARP-based activity rule (annex B);**
 - iii. Enhanced combinatorial clock auction (annex C).**
- b) Where there is a preference for one of the options, respondents are asked to provide a rationale and explanation.**

52. BCBA⁸³, Eastlink⁸⁴, Rogers⁸⁵ and Sogetel⁸⁶ all proposed the use of a SMRA or hybrid SMRA auction format. We agree with the Department's assessment that a CCA process is an improvement over the SMRA auction format because it enables bidders to bid on packages of licences instead of individual licences which eliminates the risk that bidders will win some, but not all of the licences they desire:

A combinatorial clock auction (CCA) is a bidding process that includes a price discovery stage, which is similar to the simultaneous multiple round ascending (SMRA) auction format. However, the CCA format also has attributes that remove or reduce some design concerns associated with the SMRA format. In particular, in a CCA, bidders are able to bid on packages of licences instead of individual licences, eliminating the risk that bidders may win some but not all of the licences that they desire. This is particularly important given the regional nature of the licences to be auctioned in this process and the complementarities that exist between these licences.⁸⁷

53. SaskTel supports the use of the CCA auction format with the GARP-based activity rule⁸⁸ but this rule is significantly more restrictive than the WARP-based activity rule, and therefore may not always permit – let alone encourage – truthful bidding. The GARP-based activity rule is only guaranteed to allow truthful bidding if all bids are consistent with some implied set of valuations, which must be known in advance and cannot be changed in the course of the auction. The Consultation makes the very strong claim that "it is reasonable that the bidder would possess such a set of implied valuations and would bid in accordance with them."⁸⁹ Such a claim, however, is difficult to sustain.

⁸³ BCBA Comments, paragraph 14.

⁸⁴ Eastlink Comments, 57.

⁸⁵ Rogers Comments, paragraph 112.

⁸⁶ Sogetel Comments, paragraph 52.

⁸⁷ The Notice, Annex A, paragraph 1.

⁸⁸ SaskTel Comments, paragraph 42.

⁸⁹ The Notice, Annex B paragraph 4.

54. The proposition that bidders know all their valuations upon entering the auction is inconsistent with the original motivations for the CCA design and how auctions actually transpire. If the proposition were true, one could simply have a sealed bid auction. A major motivation for the CCA design is that with many thousands of packages possible, bidders learn about and focus on the relevant ones during the auction, and might also learn something about values from the bids placed by others. The WARP-based activity rule, by imposing only a rough consistency, leaves room for exploration and revision and allows the clock rounds to perform their function. The GARP-based activity rule does not, and denies the logical foundation of the CCA design.

55. Even with no valuation ambiguity, bidders' preferences are unlikely to be based on valuations alone: most bidders also have either a cost of capital or budget constraint. The more restrictive GARP-based activity rule could make it impossible for such bidders to follow a straightforward strategy in which they would bid for the highest net value package at the current prices, while accounting for their cost of capital and respecting their budget constraint. The GARP-based activity rule would preclude price discovery, one of the key advantages of an ascending auction format – an advantage that ISED has explicitly identified as a justification for the three proposed designs.

56. Cogeco⁹⁰, Quebecor⁹¹, Tbaytel⁹² and Xplornet⁹³ supported the Enhanced combinatorial clock auction (ECCA) format. The Department should not adopt the ECCA. As we argued in our initial comments, there is no theory or evidence that the ECCA may improve incentives for truthful bidding. Rather, truthful expression of demand with respect to the clock prices is not generally a bidder's best strategy under the ECCA format.

57. Moreover, the ECCA format does not set prices for winners equal to the actual opportunity costs of the blocks they win. As the Consultation describes, prices for winners under the ECCA format are calculated according to the *maximum* valuations that their opponents *could possibly have* for all available licences. Even if the bidders were to bid truthfully, the discount-adjusted prices presented in the clock phase can be very different from true opportunity costs. This issue was also highlighted by Telus:

⁹⁰ Cogeco Comments, paragraph 104.

⁹¹ Quebecor Comments, paragraph 71.

⁹² Tbaytel Comments, paragraph 41.

⁹³ Xplornet Comments, page 6.

Under the ECCA format, the price determination mechanism does not determine a bidder's price based on what other bidders have actually bid; rather, the ECCA assumes a set of implied maximum valuations based on the historical clock round package bid patterns of other bidders. As such, the proposed ECCA format more closely resembles a first-price auction than a second-price auction as described in the Consultation. This pricing mechanism would seem to prioritise the generation of auction revenues over pricing based on market value (i.e., the opportunity cost of the spectrum). On this basis as well, TELUS' opposes the use of the ECCA format.⁹⁴

58. There is no peer-reviewed literature, either theoretical or experimental, concerning the ECCA format, and the ECCA format has never been implemented in practice. The Consultation's claims about the properties of the ECCA are unsupported conjectures, which appear to be largely false: ECCA does not generally incentivize truthful bidding or decrease bidder uncertainty. This view is supported by Rogers:

The ECCA proposal is most likely to increase spectrum prices, which has been shown to negatively affect competition, capital available for deployment, and consumer affordability. The pricing formula operates as if rival bidders had made bids within the activity rules to maximise the opportunity cost faced by each winner but without those rival bidders actually needing to make the bids. This is particularly troublesome given the lack of any caps.

It took the academic community almost a decade to start to understand the gaming incentives that the standard CCA provides and a full understanding is still lacking. The ECCA has not received any academic scrutiny so far. It has been mentioned in one paper so far, but we are unaware of any academic research that analyses the bidding incentives in the ECCA. The lack of academic scrutiny and lab testing of this to an auction format that is not well understood at this point carries significant risk of auction failure. At the same time, the ECCA does not provide any benefits over the CCA other than possibly if ISED had an improper objective of raising revenue over and above a reasonable market price for spectrum.⁹⁵

59. We recommend that the Department adopt the CCA that uses the WARP-based activity rule rather than the GARP-based activity rule, and strongly recommend that the ECCA design should not be implemented.

⁹⁴ Telus Comments, paragraph 95.

⁹⁵ Rogers Comments, paragraphs 132 and 133.

5.4 Question 6

ISED is seeking comments on:

- a) The proposal that winners of more than one block in a single service area be assigned contiguous blocks; and**
- b) The proposed structure of the assignment stage, including the order of the assignment rounds and the combination of service areas into a single assignment round.**

60. We note that there were no objections to the proposal to assign contiguous blocks to winners of more than one block in a single service area.

61. While Eastlink⁹⁶ and CCI⁹⁷ objected to the proposal to assign spectrum in descending order of population, we support this approach as it allows "each bidder to know the specific frequencies it won in the most populated service areas prior to participating in the assignment rounds for less populated service areas."⁹⁸ This is consistent with how network providers tend to build out their network.

62. We agree with the concerns expressed by Rogers⁹⁹ and Telus¹⁰⁰ that the proposed assignment stage does not allow bidders to express preference for their assignment position *in relation to one another*. While we theoretically support "Option 2" suggested by Telus, wherein all winners bid on their preferred assignment scenarios from a list of all possible permutations,¹⁰¹ we understand that this may be impossible or highly complex to implement in practice. For example, we are not certain how ISED would fairly weigh opposing bids against one another. If ISED is unable to devise a practical implementation of this suggestion, we are supportive of the original proposal for the assignment stage structure.

⁹⁶ Eastlink Comments, paragraph 66.

⁹⁷ CCI Comments, page 6.

⁹⁸ The Notice, paragraph 80.

⁹⁹ Rogers Comments, paragraph 137.

¹⁰⁰ Telus Comments, paragraph 99.

¹⁰¹ Telus Comments, paragraph 100.

5.5 Question 7

ISED is seeking comments on the proposed methodology for incrementing prices during the clock rounds, as described in annex A.

63. Contrary to the views of CCI¹⁰², SaskTel¹⁰³ and others, we do not support the proposed methodology for increasing prices as described in Annex A of the Consultation. Prices should only increase when there is excess demand for a product. Ensuring that the price of the set-aside product will never be set above the price of the open product unnecessarily intervenes with market forces and alters the proper functioning of the price discovery process that the clock rounds are specifically designed to support. This can result in artificially high prices being paid for non-set-aside spectrum which further increases the pricing distortions that arise due to implementing spectrum set-asides. Thus, the Department should amend the proposed methodology such that prices for both the set-aside product and the open product only increase when there is excess demand.

64. In the alternative, if the Department decides to maintain a set-aside, then we would support the "fair bidding rule" proposed by Rogers:

To address this problem, if a set-aside of any size is adopted, we propose a fair bidding rule. This would involve putting in place bidding restrictions on set-aside eligible bidders that ensure that such a bidder always bids for the cheapest option. As the set-aside and the open spectrum are perfect substitutes, there is no reason for such a bidder to ever bid for the more expensive option, unless there is not enough set-aside spectrum to fill their demand. We believe that this rule could be applied to any candidate formats, i.e. the clock auction, hybrid SMRA or CCA. Adding this rule would not require any revision of the price adjustment rule, although, it would have implications for the price dynamics.¹⁰⁴

65. The adoption of the "fair bidding rule" would help mitigate gaming that arises from set-aside-eligible bidders strategically increasing the price of non-set-aside spectrum. Set-aside-eligible bidders would be unable to asymmetrically raise costs for set-aside-ineligible bidders at little risk to themselves. While the auction of set-aside spectrum will still have limited competition, at least the prices for the non-set-aside spectrum will not be artificially inflated.

66. We have reviewed the Department's *Response to a Clarification Request regarding the Consultation on a Technical, Policy and Licensing Framework for Spectrum in the 600 MHz*

¹⁰² CCI Comments, page 6.

¹⁰³ SaskTel Comments, paragraph 53.

¹⁰⁴ Rogers Comments, paragraph 144.

Band (Clarification Response). We believe that further clarification is required by using more detailed examples that have multiple types of bidders if the Department decides to maintain the proposed methodology. The Clarification Response states that "a set-aside eligible bidder can place a bid for up to 7 blocks in that service area" and that "all bids placed by the set-aside-eligible bidder would be considered to be placed on the set-aside product in that service area".¹⁰⁵ We do not believe it is the Department's intent to have seven blocks of spectrum to be classified as set-aside spectrum during the clock rounds. If it is, then we strongly disagree with such an approach.

67. The Clarification Response then states "the price of only the set-aside product in a service area will increase from the previous round when the aggregate demand for the set-aside product exceeds three (four in this example)" ¹⁰⁶ This statement implies that for determining excess demand that the number of set-aside blocks during the clock rounds will be set at three. This statement when combined with the statement "all bids placed by the set-aside-eligible bidder would be considered to be placed on the set-aside product in that service area", implies that set-aside-eligible bidders are only bidding on set-aside-spectrum. Thus, if a set-aside-eligible bidder places a bid of seven blocks in a service area, then there would be excess demand of four for the set-aside product in that area. This then means that set-aside-eligible bidders are never bidding on non-set-aside spectrum.

68. Given the importance of this issue, we propose that the Department continue further public consultation to resolve the ambiguity.

6.0 BIDDER PARTICIPATION

6.1 Question 8

ISED is seeking comments on the proposed Affiliated and Associated Entities rules that would apply to bidders in the 600 MHz auction.

69. Cogeco¹⁰⁷ and Eastlink¹⁰⁸ argue that parties involved in reciprocal network arrangements are associated and should be required to bid as a single Associated Entity. Similarly, Rogers proposes that the rules be amended to recognize existing relationships between national carriers.¹⁰⁹

¹⁰⁵ Clarification Response, paragraph 4.

¹⁰⁶ Clarification Response, paragraph 5.

¹⁰⁷ Cogeco Comments, paragraphs 115 to 119.

¹⁰⁸ Eastlink Comments, paragraph 69.

¹⁰⁹ Rogers Comments, paragraph 158.

70. It is clear under the Department's proposed associated entity definition that Bell and Telus are not, indeed cannot be, associated entities for the purposes of the 600 MHz auction. In the words of the definition, there is no partnership, no joint venture, no agreement to merge, no consortium, nor any arrangement, agreement or understanding of any kind whatsoever between Bell and Telus relating in any way to the acquisition or use of any 600 MHz spectrum.

71. We continue to support the proposed Affiliated and Associated rules. The Department has reviewed the Affiliated and Associated Entities rules on numerous occasions and every time has concluded that they are sufficient to maintain auction integrity. We agree. Providing entities with an opportunity to bid separately if there is no harm to the integrity of the auction is entirely consistent with regulating to the minimum extent necessary to achieve the underlying policy objective. Entities that have demonstrated a clear intention to compete against each other in the downstream retail market are motivated to independently source and control their critical network inputs. This leads them to seek access to their own spectrum in order to meet their own subscribers' needs.

72. The Department has minimized the risk related to associated or affiliated entities by requiring an extensive review of a number of factors before applying spectrum caps to associated entities. The Department states:

To obtain approval to participate separately in the auction, associated entities will be required to demonstrate to ISED's satisfaction that they intend to separately and actively provide services in the applicable licence area. Associated entities wishing to participate in the auction separately would be required to submit their application at least two weeks in advance of the final application deadline. This requirement would provide ISED with the additional time necessary to assess the nature of the association between the entities. The assessment would be based on factors similar to those established for the subordinate licence requests as set out in section 11.2. Should the request be denied, only one of the associated entities will be eligible to apply to participate in the auction. This may also impact this associated entity's eligibility to bid on the set-aside spectrum.¹¹⁰

73. Therefore, the Department should reject proposals that request changes to the proposed rules regarding Affiliated and Associated Entities.

¹¹⁰ The Notice, paragraph 97.

74. Moreover, we continue to require our own additional spectrum to compete aggressively with Telus, Rogers, and regional providers for wireless subscribers. Since 2008, we have invested approximately \$6.4 billion in wireless capital expenditures and Telus have invested approximately \$7.4 billion.¹¹¹ In addition, since 2008, we have spent close to \$2 billion in spectrum and Telus just over \$4 billion. To its credit, ISED has not blocked or interfered with such innovative commercial arrangements, which have since been replicated by Rogers and Quebecor.¹¹²

6.2 Question 9

ISED is seeking comments on the proposed rules prohibiting collusion and other communication rules, which would apply to bidders in the upcoming 600 MHz auction.

75. Rogers asserted "that the Department must integrate its policies and auction rules regarding collusion and affiliated and associated entities within a single framework, including spectrum aggregation limits, to ensure that unintended consequences do not benefit one or more bidders in auctions."¹¹³ However, as we indicated above in response to Question 8, the current collusion and Affiliated and Associated Entities policies and rules work together to maintain the integrity of the auction process. The policies and rules establish a clear and comprehensive set of behavioural norms that prohibit parties from engaging in collusive conduct during the relevant period. We note that no other interveners expressed any objection to the existing rules related to collusion, so the Department should reject proposals to change the collusion rules.

7.0 CONDITIONS OF LICENCE

7.1 Question 10

ISED is seeking comments on its proposal to issue spectrum licences in the 600 MHz band with a 20-year licence term and the proposed wording of the condition of licence below.

The term of this licence is 20 years. At the end of this term, the licensee will have a high expectation that a new licence will be issued for a subsequent term through a renewal process unless a breach of licence condition has occurred, a fundamental reallocation of spectrum to a new service is

¹¹¹ Capex estimates are from IDC Canada, *Canadian Communications Service Provider Capex Budgets, 2016 – 2017*, April 2017, IDC #CA41245817, Table 11, page 62.

¹¹² <http://www.quebecor.com/en/comm/rogers-and-videtron-build-out-expanded-lte-network-qu%C3%A9bec-and-ottawa>.

¹¹³ Rogers Comments, paragraph 149.

required, or an overriding policy need arises.

The process for issuing licences after this term and any issues relating to renewal, including the terms and conditions of the new licence, will be determined by the Minister following a public consultation.

76. The vast majority of interveners supported 20-year licence terms with a high expectation of renewal. Only BCBA,¹¹⁴ CanWISP,¹¹⁵ and CCI¹¹⁶ expressed a preference for shorter licence terms in order to make auctions more accessible and promote rapid deployment. We believe strongly, however, that longer license terms provide the certainty and security necessary to undertake massive infrastructure investment. The Department has acknowledged this, stating that "licence terms in excess of 10 years [create a] greater incentive for financial institutions to invest in the telecommunications industry and for the industry itself to further invest in the development of network infrastructure, technologies and innovation."¹¹⁷

77. We echo the concerns expressed by several interveners¹¹⁸ about the possible introduction of opportunistic access to this spectrum in the future. As SaskTel stated in their submission, "opportunistic spectrum access mechanisms, as contemplated in the Consultation, are not appropriate now and may disrupt the auction and the value of 600 MHz spectrum."¹¹⁹

7.2 Question 11

ISED is seeking comments on the proposals on the condition of licence related to transferability and divisibility, and the proposed wording of the condition of licence below.

This licence is transferable in whole or in part (divisibility), in both bandwidth and geographic dimensions, subject to ISED's approval. A Subordinate Licence may also be issued in regard to this licence. ISED's approval is required for each proposed Subordinate Licence.

For the first five years of the licence term from the original date of issuance, a set-aside licence obtained by an entity eligible for set-aside spectrum during the licensing process (i.e. auction) is not transferable to a set-aside-ineligible entity. At all times during the licence term, a licence obtained by an entity eligible for set-aside spectrum during the licensing process is transferable to another entity that was eligible for set-aside spectrum, subject to ISED's approval.

¹¹⁴ BCBA Comments, paragraph 15.

¹¹⁵ CanWISP Comments, paragraph 9.

¹¹⁶ CCI Comments, page 7.

¹¹⁷ The Notice, paragraph 118.

¹¹⁸ For example, see comments from: Quebecor, Rogers, and SaksTel.

¹¹⁹ SaskTel Comments, paragraph 57.

The licensee must make the Transfer Request in writing to ISED. The Transfer Request will be treated as set out in Client Procedures Circular CPC-2-1-23, Licensing Procedure for Spectrum Licences for Terrestrial Services, as amended from time to time.

The licensee must apply in writing to ISED for approval prior to implementing any Deemed Transfer, which will be treated as set out in CPC-2-1-23. The implementation of a Deemed Transfer without the prior approval of ISED will be considered a breach of this condition of licence.

Should the licensee enter into any Agreement that provides for a Prospective Transfer with another holder of a Licence for commercial mobile spectrum (including any Affiliate, agent or representative of the other licence holder), it must apply in writing to ISED for review of the Prospective Transfer within 15 days of entering into the Agreement, which will be treated as set out in CPC-2-1-23. Should ISED issue a decision indicating that the Prospective Transfer is not approved; it will be a breach of this condition of licence for a licensee to remain in an Agreement that provides for the Prospective Transfer for a period of more than 90 days from the date of the decision.

In all cases, the licensee must follow the procedures as outlined in CPC-2-1-23.

All capitalized terms have the meaning ascribed to them in CPC-2-1-23.

78. There was little objection to the conditions of licence (CoL) related to transferability and divisibility as a whole. However, BCBA,¹²⁰ CCI,¹²¹ and Quebecor¹²² argued for extending the restriction to 10 years or for the entire licence term. Rogers argued that the restriction should apply to set-aside eligible and set-aside ineligible licensees alike.¹²³ We maintain that this restriction should be removed entirely.

79. A CoL that prevents a wireless carrier from selling spectrum to a willing buyer would contravene several of the enabling guidelines in the *Spectrum Policy Framework for Canada* and place an unnecessary constraint on the Minister.¹²⁴

¹²⁰ BCBA Comments, paragraph 52.

¹²¹ CCI Comments, page 7.

¹²² Quebecor Comments, paragraph 89.

¹²³ Rogers Comments, paragraph 166.

¹²⁴ Bell Comments, paragraph 40 to 41.

7.3 **Question 12**

ISED is seeking comments on the proposed deployment condition of licence stated below.

Licensees will be required to demonstrate to the Minister that this spectrum has been put to use to provide services, as specified in table F1 within 5 years of the initial issuance of the licence, as specified in table F2 within 10 years of the initial issuance of the licence, and as specified in table F3 within 20 years of the initial issuance of the licence.

Where a licence is transferred, the requirement for the new licensee to deploy will continue to be based on the initial licence issuance date.

80. Interveners were generally supportive of the deployment requirements proposed, while others advocated for strengthening the requirements.¹²⁵ We believe that the requirements in their current form are sufficient. The proposed deployment conditions are more stringent than those applied to spectrum licences that were licenced in previous auctions. Existing deployment conditions are working well. As indicated in the Spectrum Policy Framework for Canada, market forces should be relied upon to the maximum extent feasible. Wireless providers should be able to broadly determine their network deployment plans based on market conditions which would reflect the demand for services as well as the network deployment cost.

7.4 **Question 13**

ISED is seeking comments on proposed conditions of licence outlined in annex G that would apply to licences issued through the proposed auction process for spectrum in the 600 MHz band.

81. There was general support for the proposed CoL outlined in annex G, with several notable exceptions that are elaborated upon below.

7.4.1 **Research and Development**

82. Wireless service providers broadly support the elimination of the CoL related to research and development (R&D) spending requirements for all spectrum licenses, including those in the 600 MHz band. In this proceeding, Quebecor,¹²⁶ Rogers,¹²⁷ Shaw,¹²⁸ Sogetel,¹²⁹ and Telus¹³⁰ joined Bell in calling for the removal or significant reduction of this obligation.

¹²⁵ See comments from: CCI, Ecotel, SaskTel, Sogetel, Tbaytel, and Telus.

¹²⁶ Quebecor Comments, paragraph 96.

¹²⁷ Rogers Comments, paragraph 176.

¹²⁸ Shaw Comments, paragraph 104.

¹²⁹ Sogetel Comments, paragraph 68.

¹³⁰ Telus Comments, paragraph 122.

83. As Rogers argued, this CoL has become obsolete and no longer serves its original purpose:

As the Department has noted elsewhere, this condition of licence was initially established to stimulate R&D in the telecommunications sector when the first mobile spectrum licences were issued in the mid-1980s. Since then, billions of dollars have been invested in R&D and the mobile industry in Canada is well established. This condition has therefore achieved its objective and is no longer required.¹³¹

84. Its removal would benefit the whole industry and would be consistent with the Department's policy objectives, as Telus explained in their submission:

...the widespread support for removal of this COL is based on ensuring a framework that places maximum reliance on market forces, consistent with the Department's spectrum policy. Rather than compliance with an artificial R&D spending requirement, licensees would make their investments based on the best means to serve customers in the competitive marketplace across the country, rather than forcing a portion of their capital investment to fall within the strict parameters of the R&D COL.¹³²

85. If ISED does not eliminate the R&D spending condition, it should, at a minimum, eliminate the revenue exemption threshold and lower the 2% spending requirement significantly (e.g., to 1%). Rogers also called for the latter change in their comments.¹³³

7.4.2 Mandatory Roaming

86. We recommended the removal of the CoL related to mandatory roaming in light of the Commission's decision to mandate the provision and regulate the rates of GSM-based wholesale roaming services provided by Bell, Rogers and Telus to all other wireless carriers.¹³⁴ As the Commission concluded in TRP 2015-177, after examining the competitiveness of the wireless market, the provision of wholesale roaming by Bell, Rogers, and Telus to each other is subject to a level of competition that is sufficient to protect the interests of users.¹³⁵ As such, the Commission continues to forbear from the regulation of these services.

87. Rogers stated that this CoL is not duplicative of CRTC tariff regulation, arguing that the mandatory roaming requirement and roaming request process help to balance "the objective of

¹³¹ Rogers Comments, paragraph 176.

¹³² Telus Comments, paragraph 125.

¹³³ Rogers Comments, paragraph 179.

¹³⁴ Telecom Regulatory Policy CRTC 2015-177, *Regulatory framework for wholesale mobile wireless services* (TRP 2015-177), paragraph 128.

¹³⁵ TRP 2015-177, paragraph 127.

encouraging the "deployment of advanced networks that provide the greatest choice of basic and advanced services available at competitive prices to the greatest number of Canadians" with the fact that operators may require access to wholesale roaming services on a reasonable basis as they continue to expand their networks in an orderly manner."¹³⁶ We disagree.

88. The mandatory roaming CoL is not balanced, it puts carriers at risk of arbitrage, and distorts roaming rates while serving a duplicative purpose. More generally, a mandatory roaming CoL is at odds with the principles of facilities-based competition and creating incentives to invest in network infrastructure. Telus agrees that this policy is not an appropriate solution in the current context, especially given "the anticipated roll-out of new 5G technologies, the financial capability of well-capitalised regional providers and the existence of a CRTC mandatory roaming tariff."¹³⁷

89. Additionally, the fact that wholesale roaming rates are commercially negotiated but subject to mandatory arbitration in the event of a dispute effectively means that the rates do not reflect true market value. The rates are, instead, subject to downward pressure because: a) the provision of wholesale roaming services is mandatory; and b) the rates imposed in arbitration typically reflect historic rates.

90. To the extent that ISED's regulation of wholesale roaming services may result in different and/or conflicting commercial outcomes for wireless carriers than the Commission's wholesale roaming regulations, then ISED's proposed CoL on mandatory roaming introduces unnecessary regulatory uncertainty for all market participants.

91. Not only is the policy flawed in concept, Telus raises two key implementation problems. First, there should be no "in-territory" roaming permitted for 5G technologies on the 600 MHz band. As they explain, "the ostensible reason for allowing in-territory roaming rights is to afford a licensee network coverage as it deploys its own network."¹³⁸ However, given that no network operator has a head start on building out brand-new 5G technologies, mandatory roaming simply allows some carriers to get away with delaying or limiting deployment at the expense of others. As Telus states, because no carrier is at a disadvantage when it comes to 5G deployment, "there is simply no basis for allowing in-territory 5G roaming."¹³⁹

¹³⁶ Rogers Comments, paragraph 181.

¹³⁷ Telus Comments, paragraph 138.

¹³⁸ Telus Comments, paragraph 128.

¹³⁹ Telus Comments, paragraph 130.

92. In addition, we support Telus' call for ISED to eliminate mandatory in-footprint roaming completely in order to close a network arbitrage loophole. As Telus describes, the mandatory roaming CoL leaves wireless carriers vulnerable to network arbitrage, despite attempts to mitigate this risk using deployment requirements:

...in the in-footprint scenario, the introduction of strict deployment requirements is insufficient in addressing TELUS' concerns with mandatory roaming – an outcome which TELUS observes is taking place with alarmingly increasing frequency in urban and suburban settings. Here, network arbitrage is the result of a decision to "under-deploy" (i.e., fail to continue infilling the network and deploying indoor and small cell coverage) within an operator's network footprint, while choosing to rely on artificially depressed rates, which arise, as the near-certain outcome of commercial negotiation turning to arbitration.

In TELUS' view, the only way to close this loophole is to eliminate the requirement for providing in-footprint roaming.¹⁴⁰

93. Therefore, we continue to recommend eliminating the mandatory roaming CoL in its entirety. At the very least, however, ISED should resolve the flaws inherent in mandatory in-footprint roaming by removing it from the CoLs for 600 MHz licences and those for all other bands.

7.4.3 Annual Reporting

94. Several parties highlighted the regulatory burden associated with supplying annual reporting documents to ISED and suggested remedies to alleviate this burden.¹⁴¹ For example, SaskTel offered this suggestion:

Consistent with the [Canadian Government's "Red Tape Reduction Plan"]'s objectives, the Department should consider moving from an annual reporting process to an "on request" model where the Department would request each licence holder to provide these reports such as the deployment updates only when required by the Department. Such a reporting mechanism will reduce the administrative burdens on both the Department and spectrum licence holders, while still preserving the ability to maintain timely access to the information required by the Department to manage the spectrum licences.¹⁴²

¹⁴⁰ Telus Comments, paragraph 136 to 137.

¹⁴¹ See comments from: BCBA, Quebecor, Rogers, SaskTel, and Telus.

¹⁴² SaskTel Comments, paragraph 65.

95. We encourage ISED to reduce the regulatory burden related to annual reporting. We agree with other interveners¹⁴³ that this can be accomplished by: reducing the frequency with which the data is collected; and/or streamlining the scope of information requested in the reports to only those data that are essential to ISED's monitoring activities; and/or modifying the CoL such that licensees are required to provide information on ISED's request, with appropriate notice.

8.0 AUCTION PROCESS

8.1 Question 14

ISED is seeking comments on the proposed opening bids as presented in Table 1.

96. While many parties expressed support for the proposed opening bids, several interveners said they were set too high.¹⁴⁴ Other interveners who advocated for changes to the auction process submitted that the opening bids would need to be adjusted to reflect their particular proposals.¹⁴⁵ The Department's intention is to set the opening bid prices to ensure that Canadians receive a fair return for the use of this spectrum. We agree with Telus that the best way to ensure spectrum is sold at fair value is to hold an open auction.¹⁴⁶ We also agree with Telus that in competitive auctions with no spectrum set-asides that opening bids can be lower in order to permit price discovery across a broad range of potential valuations:

TELUS suggests that in general, highly competitive open auctions without set-asides do not require opening bids at high prices. Opening bids should be low enough so as to permit price discovery across a full range of potential bidder valuations. The competitive nature of an open auction will in return ensure that market value is paid for all spectrum, thus guaranteeing an appropriate compensation to Canadian taxpayers.

The Department seems to recognise that this is not the case for set-aside spectrum. By selecting opening bids that reflect the outcome of the 700 MHz auction, the Department seems to be trying to set opening bids high enough such that the proposed 30 MHz of set-aside spectrum (that will almost certainly sell at or near the opening bid price) is not seen as being given away while shortchanging Canadian taxpayers.¹⁴⁷

¹⁴³ See comments from: BCBA, Quebecor, Rogers, SaskTel, and Telus.

¹⁴⁴ See: Telus, paragraph 141-143; CanWISP, paragraph 10; MRC de Temiscouata, paragraph 10; Tbaytel, paragraph 55; Ice Wireless, paragraph 23.

¹⁴⁵ See: BCBA, paragraph 58; Sogetel, paragraph 70; Ecotel, paragraph 52; CCI, page 8; and Cogeco, paragraph 128.

¹⁴⁶ Telus Comments, paragraph 144(i).

¹⁴⁷ Telus Comments, paragraphs 142 and 143.

97. Therefore, if the Department decides not to impose a spectrum-set-aside, then we would support Telus' proposal to lower the opening bid prices, otherwise the opening bid prices should remain at their proposed level in order to mitigate the "shortchanging" of Canadian taxpayers with respect to the price of set-aside spectrum.

8.2 Question 15

ISED is seeking comments on the proposed eligibility points for spectrum licences in the 600 MHz as outlined in Table 2, and pre-auction deposits as outlined in section 12.4 of the consultation.

98. Interveners generally expressed support for the proposed eligibility points, though this support was conditional to the interveners' proposed changes to opening bid prices. BCBA requested a reduction to the pre-auction deposit requirement for entities with less than \$10M in annual revenues.¹⁴⁸ We agree with the Department that the proposed pre-auction financial deposits will enhance the integrity of the auction.¹⁴⁹ Requiring auction participants to have access to funds that at least cover the opening bid amounts will reduce the probability that bidders are bidding for spectrum that they cannot afford. This reduces the possibility of incurring the significant administrative burden and inefficiencies that would arise in the auction process and the delayed deployment of the spectrum, if a bidder were to default on their payment.

99. Shaw argued, however, that full payment should be delayed post-auction because the spectrum will not be immediately available to deploy.¹⁵⁰ According to their proposal, an initial 50% installment of the final payment would be due within 10 days of the announcement of winners, and the second 50% installment would not be due until the spectrum is "fully available to be put into use for revenue-generating commercial mobile services."¹⁵¹

100. The timing of the auction was not indicated in the Notice. We propose that the auction should not occur until the spectrum in question has been vacated by the broadcasters. It would be unnecessarily onerous for successful bidders to pay hundreds of millions of dollars for something that they cannot use.

¹⁴⁸ BCBA Comments, paragraph 59.

¹⁴⁹ The Notice, paragraph 154.

¹⁵⁰ Shaw Comments, paragraph 112.

¹⁵¹ Shaw Comments, paragraph 112.

101. Shaw's proposal to delay payment of 50% of the auction price until the spectrum is available is directionally correct but would still result in an inefficient use of funds for successful bidders. Any potential benefit that Shaw receives from the certainty of knowing the auction outcome are overwhelmed by the real financial costs of prematurely paying for spectrum that cannot be used for months or years. Shaw's proposal is yet another indication that it has sufficient financial resources to participate in the wireless market and is not in need of another subsidy as a result of paying below-market prices for set-aside spectrum.

9.0 LICENCE RENEWAL PROCESS

9.1 Question 16

ISED is seeking comments on the proposed renewal process for spectrum licences in the 600 MHz band.

102. No interveners objected to the proposed renewal process, although Ecotel requested that unassigned licences be made available on a "first come first served" (FCFS) basis.¹⁵² We disagree. ISED should have a residual auction with no pro-competitive measures for any licences that are unassigned to ensure the efficient allocation of spectrum licences through the use of market forces. Only if the licences remain unassigned after the residual auction should they be made available on an FCFS basis.

103. We generally support the proposed renewal process. However, we reiterate that ISED should modify their statement that "licensees will have a high expectation that a new licence will be issued for a subsequent term through a renewal process" to include all subsequent terms, assuming compliance with CoLs, the absence of a fundamental reallocation of spectrum to a new service, or the absence of an overriding policy need.

104. We appreciate the opportunity to provide these Reply Comments.

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¹⁵² Ecotel Comments, paragraph 56.